

Miniature Gasoline Generator Set. OPC-29-50, "AWARD" III., con't.

7 February 1950

SECRET

Hand lever - gearing, etc.	=	4.0 #
Outer case	=	1.75
Gas tank	=	1.0

Weight (TOTAL ESTIMATE)

11.50 lbs.

B. The above estimated weight of the components is slightly higher than the proposed weight. Inasmuch as the design details of the contemplated unit are not known, the substitution of lightweight materials could reduce the above figure.

IV. ESTIMATION OF SIZE AND VOLUME REQUIREMENTS

Case size = 6 x 6 x 9 inches =	354 cubic inches
Alternator = 5.5" Dia. x 1.5" Thick, Volume =	35.6 " "
Gas tank - 14 oz. Volume =	20.3 " "
Engine about 5-1/2" x 3" x 3" Volume =	49.5 " "
Cooling Blower - 3" Dia. x 1" Thick, Volume =	7.0 " "
Total Components Volume	112.4 Cubic inches
Percentage of Volume required by Components =	$\frac{112.4}{354} (100) = 31.6\%$

V. CONCLUSION

The above analysis, though rough and incomplete, indicates the feasibility of the basic design. It is impossible, due to lack of information, to accurately calculate the expected performance of the power unit, and simplified assumptions must be used. It was noted throughout the various phases of the investigation that a margin of safety exists that would encompass the errors caused by the necessary assumptions used.

SECRET